

CLAIMS

What is claimed is:

1           1.       An ambulance stretcher support for an ambulance having a floor with a top  
2 floor surface, comprising:  
3           a stretcher leg receiving member adapted to releasably receive an ambulance  
4 stretcher leg;  
5           a base configured to be mounted to the ambulance floor and to mount the stretcher  
6 leg receiving member for movement between a position substantially coplanar with the top  
7 floor surface, and a position below the top floor surface;  
8           a vibration reduction device mounted between the base and the stretcher leg  
9 receiving member; and  
10          wherein a stretcher leg can be releasably supported on the stretcher leg receiving  
11 member and the vibration reduction device will reduce transfer of vibration from the  
12 ambulance floor to the ambulance stretcher.

1           2.       The ambulance stretcher support of claim 1, wherein the stretcher leg  
2 receiving member includes a concave stretcher wheel receiving surface.

1           3.       The ambulance stretcher support of claim 1, wherein the vibration reduction  
2 device is comprised of at least three coil springs mounted between the stretcher leg  
3 receiving member and the base.

1           4.       The ambulance stretcher support of claim 3, and further wherein the stretcher  
2 leg receiving member includes a concave stretcher wheel receiving surface.

1           5.       The ambulance stretcher support of claim 3, wherein the coil springs are  
2 conical compression springs.

1           6.       The ambulance stretcher support of claim 3, wherein the at least three coil  
2 springs are spaced substantially equiangularly about a central axis.

1           7.       The ambulance stretcher support of claim 1, wherein the stretcher leg  
2 receiving member is slidably mounted to the base, and the ambulance stretcher support  
3 further comprises an "O"-ring seal mounted between the stretcher leg receiving member and  
4 the base.

1           8.       The ambulance stretcher support of claim 1 wherein the vibration reduction  
2 device is comprised of at least three, and no more than nine, springs mounted between the  
3 stretcher leg receiving member and the base.

1           9.       The ambulance stretcher support of claim 1, wherein the stretcher leg  
2 receiving member is movable with respect to the base along an axis, and wherein the base  
3 includes a thickness dimension along the axis that is no greater than approximately one inch.

1           10.      The ambulance stretcher support of claim 1, wherein the stretcher leg  
2 receiving member is releasably mounted to the base, and the vibration reduction device  
3 comprises a plurality of springs releasably mounted between the base and stretcher leg  
4 receiving member such that said springs can be alternatively removed from or added  
5 between the stretcher leg receiving member and base.

1           11.     The ambulance stretcher support of claim 1, wherein the vibration reduction  
2 device is limited to travel of not more than approximately .75 inch.

1           12.     The ambulance stretcher support of claim 1, wherein the base includes an  
2 ambulance floor mounting flange and an annular wall extending along an axis from the flange  
3 and defining a vibration reduction device receiving chamber.

1           13.     The ambulance stretcher support of claim 1, wherein the vibration reduction  
2 device is comprised of a plurality of coil springs, and wherein the stretcher leg receiving  
3 member includes spring-locating bosses positioned about the stretcher leg receiving  
4 member.

1           14.     The ambulance stretcher support of claim 1, and wherein the vibration  
2 reduction device is comprised of a plurality of coil springs, and wherein the stretcher leg  
3 receiving member includes spring-locating bosses positioned about a central axis to receive  
4 and angularly space the coil springs at substantially equal angles about the central axis.

1           15.     In an ambulance floor having a top surface and a bottom pan, an apparatus  
2     for releasably and yieldably receiving an ambulance stretcher leg, comprising:

3           a stretcher leg receiving member;

4           a base mounted to the ambulance floor and extending toward the bottom pan from  
5     the top surface; and

6           a vibration reduction device mounted between the base and the stretcher leg  
7     receiving member, yieldably and normally resiliently supporting the stretcher leg receiving  
8     member adjacent to and substantially coplanar with the top surface of the floor, and  
9     configured to yieldably deflect responsive to a stretcher leg received on the stretcher leg  
10    receiving member.

1           16.     The apparatus of claim 15, wherein the stretcher leg receiving member  
2     includes a concave stretcher wheel receiving indentation substantially centered on an axis  
3     passing through the stretcher leg receiving member and the base.

1           17.     The apparatus of claim 15, wherein the stretcher leg receiving member  
2     includes a concave stretcher wheel receiving indentation substantially centered on an axis  
3     passing through the stretcher leg receiving member and the base, and wherein the vibration  
4     reduction device is comprised of a plurality of compression springs spaced substantially  
5     equiangularly about the axis.

1           18.     The apparatus of claim 15, wherein the vibration reduction device is  
2     comprised of a plurality of conical compression springs.

1           19.     The apparatus of claim 15, wherein the base and stretcher leg receiving  
2 member are defined by a thickness dimension along an axis that is no greater than  
3 approximately one inch.

1           20.     The apparatus of claim 15, wherein the vibration reduction device is  
2 comprised of a plurality of conical compression springs, and wherein the stretcher leg  
3 receiving member includes a plurality of bosses projecting into and positioning the conical  
4 compression springs at selected angular positions about an axis.

1           21.     An ambulance floor mounted vibration damping system for releasably  
2 supporting a stretcher having a plurality of legs, and for reducing transfer of vibration from  
3 the ambulance floor to the stretcher, comprising:

4                 a stretcher leg receiving member for each leg of the stretcher;

5                 a base for each stretcher leg receiving member, adapted to be mounted to the  
6 ambulance floor in position beneath the stretcher legs;

7                 a vibration reduction device mounted between each base and an associated  
8 stretcher leg receiving member, yieldably and resiliently supporting the stretcher leg  
9 receiving member adjacent the ambulance floor, and configured to yieldably deflect under  
10 weight of a stretcher leg received on the stretcher leg receiving member..

1           22.    A process for reducing transmission of vibration from an ambulance floor to  
2 the legs of a stretcher, comprising:  
3           embedding a base within the ambulance floor and with a bottom surface situated  
4 below a top surface of the ambulance floor;  
5           placing a vibration reduction device on the bottom surface;  
6           placing a stretcher leg receiving member over the vibration reduction device, with a  
7 top surface of the stretcher leg receiving member substantially coplanar with the top surface  
8 of the ambulance floor; and  
9           positioning a stretcher on the ambulance floor with a leg thereof resting on the  
10 stretcher leg receiving member, whereby transmission of vibration from the ambulance floor  
11 to the stretcher is reduced.

1           23.    The process of claim 22, wherein placing a vibration reduction device on the  
2 bottom surface of the base is further defined as placing a plurality of conical compression  
3 springs on the bottom surface.

1           24.    The process of claim 22, wherein placing a vibration reduction device on the  
2 bottom surface of the base is further defined as placing from three to nine conical  
3 compression springs on the bottom surface.

1           25.    The process of claim 22, further including providing the stretcher leg receiving  
2 member with a concave stretcher wheel receiving surface.